

### Claims General

Dependent Claims 59 and 93 are canceled.

In the Amendment dated February 3, 2004 in response to the first office action applicant requested multiple times that if any ``claims are again rejected upon any combination of references, that the Examiner include an explanation, in accordance with M.P.E.P. § 706.02, *Ex parte Clapp*, 27 U.S.P.Q. 972 (P.O.B.A. 1985), and *Ex parte Levengood*, supra, a ``factual basis to support her conclusion that it would have been obvious'' to make the combination.'' This was not done as explained below.

Applicant believes that all of the other claims should be allowed as explained below.

### Claim Objections

#### Response to the Detailed Action Paragraph 3:

Applicant cancels dependent claim 93.

### Claim Rejections

#### Response to the Detailed Action Paragraph 5a:

Applicant agrees with objection of Paragraph 5a.  
Applicant therefore cancels dependent claim 59.

#### Response to the Detailed Action Paragraph 5b:

Applicant believes that the one of ordinary skill in the art would know after reading applicants original specification that the filter means and the absorbent pad used in the vacuum filtration device of applicants invention to detect microorganisms, yeast, and mold in a liquid sample must be hydrophilic for the following reasons:

a) In the title and throughout applicants original specification it is stated that the invention relates to a Vacuum Filtration Apparatus Capable of Detecting Microorganisms and Particulates in Liquid Samples.

b) Referring to Applicants original specification, page 33, line 9 states:

``The operator will remove lid 60 from funnel 30, and then add a quantity of liquid to be tested to the interior of funnel 30. The liquid will wet filter means 90. A vacuum source is then connected to outlet port 10 of base 1.''

Since the vacuum device is being used to detect microorganisms, yeast, or mold in the liquid sample, the liquid sample must be an aqueous solution, because microorganisms, yeast and mold only grow in aqueous solutions. In order for the aqueous solution to wet the filter means, the filter means **must be hydrophilic**. If the filter means were hydrophobic, an aqueous solution would not wet it. To wet a hydrophobic filter means, a solvent such as alcohol must be used, and the solvent would kill the microorganisms, yeast, or mold.

c) Page 19, line 34 of the original specification, describing the prior art states:

*``This liquid will wet the pores of the microporous filter (i.e. a hydrophilic filter).''*

Applicants vacuum filtration device is used to detect microorganisms, yeast, and mold, in the same applications as the prior art. Therefore, applicants

vacuum filtration device must also use a hydrophilic filter. If a hydrophilic filter is used, a hydrophilic absorbent pad must also be used.

d) All commercially available devices used for the purpose of detecting microorganisms, yeast, or mold in liquid samples use hydrophilic filter means, and hydrophilic (cellulosic) absorbent pads.

Because the proper antecedent basis for *hydrophilic filter means and for hydrophilic absorbent pad* is provided in the original specification, applicant submits that the rejection of claims 61 and 62, under 35 U.S.C. 112 are improper and should be withdrawn, and that claims 61 and 62 should be allowed.

**Response to the Detailed Action Paragraph 5c:**

Applicant believes that the original specification contains the proper antecedent basis for the term *the filter seal ring being made from a non-elactomeric material*, for the following reasons:

Referring to Applicants original specification, page 45, line 9 states:

*Filter seal ring 410 is preferably molded from a flexible plastic such as polypropylene, or polyethylene.* Polypropylene and polyethylene are both non-elastomeric materials. Elastomer being defined in Webster as *any of various elastic substances*

*resembling rubber''*. Webster defines elastic as *``capable of recovering size and shape after deformation''*. Neither polypropylene or polyethylene will recover their original shape after deformation.

Furthermore if the seal ring were to be made from an elastomeric material, it would not be rigid enough to hold the pre-filters in place.

Because the proper antecedent basis for *``non-elastomeric material''* is provided in the original specification, applicant submits that the rejection of claims 112, 113, and 114, under 35 U.S.C. 112 is improper and should be withdrawn, and that claims 112, 113, and 114 should be allowed.

**Response to the Detailed Action Paragraph 5d:**

The explanations given above for Paragraphs 5b and 5c cover Paragraph 5d as well.

**Response to the Detailed Action Paragraphs 7 through 17:**

The office action does not give a reason for combining Kane and Krueger (i.e. none of the prior art, or any other reference suggests making this combination), therefore Applicant believes that the combination is improper and should be withdrawn, and that the rejection of claims 58-61, 68 and 115-118 based on these references is improper and should be withdrawn, and that claims 58-61, 68 and 115-118 should be allowed.

Furthermore with regard to **paragraph 11 of the detailed action**, the pore size of the filter means needed to *remove bacteria from the liquid being filtered, and to trap the bacteria on the upstream surface of the filter means*'' depends on the type of bacteria in the liquid. The pore size of the filter means is usually in the 0.2  $\mu\text{m}$  to 0.45  $\mu\text{m}$  range, but could be larger if a specific large bacteria is of interest; and the type of filter material is not limited to microporous, but could be woven for example. Therefore applicant believes the rejection of claim 61 is improper and should be withdrawn, and that claim 61 should be allowed.

**Response to the Detailed Action Paragraphs 18 through 21:**

The office action does not give a reason for combining Kane, Krueger and Kenyon (i.e. none of the prior art, or any other reference suggests making this combination), therefore Applicant believes that the combination is improper and should be withdrawn, and that the rejection of claim 62 based on these references is improper and should be withdrawn, and that claim 62 should be allowed.

Furthermore with regard to **paragraph 21 of the detailed action** see the response to **paragraphs 32 and 39 of the detailed action** below.

**Response to the Detailed Action Paragraphs 22 through 27:**

The office action does not give a reason for combining Kane, Krueger and McNerney et al. (i.e. none of the prior art, or any other reference suggests making this combination), therefore Applicant believes that the

combination is improper and should be withdrawn, and that the rejection of claims 62-63 based on these references is improper and should be withdrawn, and that claims 62-63 should be allowed.

Furthermore with regard to **paragraph 25 of the detailed action** see the response to **paragraphs 32 and 39 of the detailed action below.**

**Response to the Detailed Action Paragraphs 28 through 30:**

The office action does not give a reason for combining Kane, Krueger and Zuk (i.e. none of the prior art, or any other reference suggests making this combination), therefore Applicant believes that the combination is improper and should be withdrawn, and that the rejection of claim 63 based on these references is improper and should be withdrawn, and that claim 63 should be allowed.

**Response to the Detailed Action Paragraphs 32 and 39:**

Applicants invention as claimed in claim 80 (paragraph 32 of the detailed action) and in claim 120 (paragraph 39 of the detailed action), requires that the absorbent pad have **both** a thickness *``sufficiently greater than the thickness of the hydrophilic filter means''*, and *``sufficiently greater than the height of said pad well''*. McNerney et al. **does not** disclose the thickness of the hydrophilic absorbent pad being sufficiently greater than the height of the pad well, and it **is not** just a choice of manufacturing to use an absorbent pad with a thickness sufficiently greater than the height of the pad well, but a requirement of claims 80 and

120. Furthermore, it is irrelevant to applicants invention as stated in claims 80 and 120 to *"slow down the flow of filtered fluid through the apparatus"*, or *"to provide greater cushioning support for the filter means"* as claimed by the examiner in paragraphs 32 and 39.

Applicant has demonstrated with prototype units using the same absorbent pad used in competitive devices, and by making the pad well sufficiently shorter than the thickness of the dry absorbent pad, that the hydrophilic filter means remains wrinkle free after both hydrophilic filter means and the hydrophilic absorbent pad have been wetted. Whereas, competitive devices using the same absorbent pad with the pad well having a height equal to the thickness of the dry absorbent pad produce a wrinkled hydrophilic filter means after both hydrophilic filter means and the hydrophilic absorbent pad have been wetted.

For the above reasons applicant believes that the rejection of claims 80 and 120 on McNerney et al. are improper and should be withdrawn, and that claims 80 and 120 should be allowed.

**Response to the Detailed Action Paragraphs 33 through 38,  
and Paragraph 40:**

As just explained applicant believes that claims 80 and 120 are allowable over McNerney et al. Therefore the rejection of dependent claims 81-85 and 92-94 on McNerney et al. that incorporate all of the subject matter of independent Claim 80 and add additional subject matter and further limit independent Claim 80 should be withdrawn and dependent claims 81-85 and 92-94 should be allowed; and the rejection of dependent claim 121 on McNerney et al. that

incorporates all of the subject matter of independent Claim 120 and adds additional subject matter and further limit independent Claim 120 should be withdrawn and dependent claim 121 should also be allowed.

**Response to the Detailed Action Paragraphs 41 through 45:**

The office action does not give a reason for combining Kane and Kenyon (i.e. none of the prior art, or any other reference suggests making this combination), therefore Applicant believes that the combination is improper and should be withdrawn, and that the rejection of claims 106, and 109-110 based on these references is improper should be withdrawn, and that claims 106, and 109-110 should be allowed.

**Response to the Detailed Action Paragraph 47:**

As explained above, applicant believes that independent claims 58, 80, and 106 should be allowed. Therefore dependent claims 64-67 that incorporate all of the subject matter of independent Claim 58 and add additional subject matter and further limit independent Claim 58 should also be allowed; and that dependent claims 86-91 that incorporate all of the subject matter of independent Claim 80 and add additional subject matter and further limit independent Claim 80 should also be allowed; and that dependent claims 107-108 and 111 that incorporate all of the subject matter of independent Claim 106 and add additional subject matter and further limit independent Claim 106 should also be allowed.